

KLOTZ (H. G.)

ENDOSCOPIC STUDIES

On Vegetations, Polypi, Angeioma,
Membranous and Diphtheritic Ure-
thritis, Suppuration from the
Ejaculatory Ducts, Cyst
of the Colliculus
Seminalis, etc.

BY

HERMANN G. KLOTZ, M. D.

REPRINTED FROM THE

New York Medical Journal
for January 26, 1895.





ENDOSCOPIC STUDIES

ON VEGETATIONS, POLYPI, ANGEIOMA,
MEMBRANOUS AND DIPHThERITIC URETHRITIS,
SUPPURATION FROM THE EJACULATORY DUCTS,
CYST OF THE COLLICULUS SEMINALIS, ETC.

By HERMANN G. KLOTZ, M.D.

SOME of the cases reported on the following pages were briefly mentioned in a paper published in 1886, entitled *Clinical Observations on Endoscopy of the Male Urethra* (*N. Y. Medical Journal*, November 27, 1886). I then expressed the intention of describing them more fully in a separate paper. For various reasons, however, the notes remained untouched in my desk until two years ago, when my interest in the cases was renewed by the preparation of the article on Endoscopy for *Morrow's System of Genito-urinary Diseases*. Unfortunately, the space allotted to the subject did not allow of the introduction of clinical material. Some of the observations present such peculiar, almost unique, features that it seems justified even at a late date to place them on record. In several instances the importance of the endoscopic examination of the prostatic urethra is particularly well illustrated, which by some recent authors seems to be considered unnecessary or impracticable.

The instruments and means employed for the endoscopic examination in all the cases were the same as I described and recommended to the profession in the paper mentioned above. The results obtained sufficiently testify to their usefulness, and explain why, in the face of their extreme simplicity, I have not been induced to give them up for more complicated although probably more perfect instruments.

I. PAPILLARY EXCRESCENCES : VEGETATIONS.

Vegetations or papillary excrescences of the mucous membrane of the urethra, situated in or near the meatus, are of frequent occurrence, and, as they can easily be seen and reached, do not offer more difficulties to diagnosis and treatment than those commonly found in the sulcus coronearius glandis, on and around the frenulum, known as venereal warts or condylomata acuminata. They share, however, with these their neighbors the tendency to obstinately return after having been removed by caustics or by mechanical means. Vegetations in the deeper portions of the urethra were first distinctly described by Vajda (*Wiener medic. Wochenschrift*, 1882, p. 1029), not observed, however, during life, but on the autopsy table. Vajda cites similar observations reported by Morgagni, Hunter, Rokitansky, Dittel, Tarnowsky, and others.

The literature on the occurrence of multiple new growths of the male urethra has been collated by O. Rosenthal (*Berliner klin. Wochenschrift*, 1884, No. 23), who has published a minute description of a well-observed case; the polypi in this case probably were not of a distinctly papillomatous character. Since then Oberländer has described in his numerous publications a "urethritis papillomatosa," stating the occurrence of multiple papillary excrescences along the urethra; and more recently F. R. Eversole (*St.*

Louis Polyclinic, vol. i, August 5, 1889) and F. M. Briggs (*Boston Med. and Surg. Journal*, October 24, 1889) have published cases of papillomatous growths, the latter particularly presenting features quite similar to those which I have observed in two instances.

CASE I.—Arthur H., aged twenty six years, a clerk, contracted gonorrhœa for the first time in the spring of 1883. The disease never showed any severe symptoms; the scanty discharge was usually removed by injections, but obstinately returned as a thin mucous fluid as soon as the syringe was laid aside. The patient therefore was subjected to endoscopic treatment from December, 1883, to March 9, 1884, applications of silver and iodine preparations being made about once a week. By the later date the mucous membrane of the bulbous urethra, which at first had presented a deep red color and finely granulated surface, had assumed an almost normal condition, while in the pendulous portion a number of dilated lacunæ Morgagni remained surrounded by patches of dark red, slightly infiltrated, and uneven mucous membrane. During this treatment small warts had developed on both lips of the meatus, which were removed with a strong solution of chromic acid. As a slight mucous discharge persisted in the morning, steel sounds from No. 28 to No. 30 F. were passed several times in March. Owing to a fresh exposure on March 23d, symptoms of acute gonorrhœa reappeared, accompanied by considerable swelling of the entire glans and pains in the lymphatic ganglia of both groins. By April 29th the acute symptoms had entirely disappeared, but warts had developed again on the lips of the meatus, in their posterior angle, and on the frenulum. As the short and tense condition of the latter seemed to favor the recurrence of the vegetations, it was immediately cut; the wound healed within a few days, but on May 7th the fossa navicularis was found to be filled with a thick, yellow discharge of a peculiarly offensive odor; several small warts could be seen after cleaning. Endoscopic tube No. 24 F. was now introduced as far as the bulbous without any difficulty, although not without considerable pain. After re-

removal of the obturator the field of observation was occupied by a whitish mass of irregular surface which after cleaning and drying proved to be a cluster of papillomatous excrescences closely resembling common condylomata acuminata. On slowly removing the tube it became apparent that the entire pendulous urethra was studded with numerous similar wartlike formations, which either singly or in groups or clusters ("nests" of Rosenthal) principally occupied the lower surface, some, however, growing from the upper aspect and from the lateral folds. They varied greatly in length, thickness, and shape, some reaching a length of about six millimetres; some were filiform and pointed, others club-shaped; some had a thin stem, while others were seated on a broader, substantial basis; some of the larger, cockscomb-shaped ones showed distinct branches and indentations. They did not bleed on being touched, and were set off by their whitish, glistening surface against the pink or red mucous membrane. The smallest excrescences seemed to be formed by a single enlarged papilla. Although no regular distribution could be observed, three larger clusters or tufts could easily be distinguished—one at the entrance to the bulbus, one about in the center of the pendulous urethra, and one about two inches from the meatus—while nearer toward the orifice the warts became smaller and less numerous.

As the patient intended to go to Europe within a few weeks, it was desirable to remove the new growths as quickly as possible. In several sittings the larger groups of warts were removed by means of the polypi guillotine (Morrow's *System*, vol. i, p. 221); the smaller ones were cauterized with a concentrated (fifty-per-cent.) solution of chromic acid. On May 2d two single papillomata about three millimetres long at the entrance to the bulbus and a few small stumps nearer the orifice were all that could be found; they were removed with a ring-shaped curette. None of the procedures were accompanied by much bleeding, but generally followed for a few days by a moderate increase of discharge and pain during micturition. May 23d, when the patient left for Europe, no warts could be seen. On his return in August a small group of warts was observed within about two inches and a half from the meatus,

and October 21st a single growth on the same place; in both instances they were removed with the curette. On November 10th no excrescences of any kind were visible, although a number of dilated lacunæ Morgagni indicated that the mucous membrane was not yet in a normal condition. A slight mucous discharge continued for some time, but up to February of the following year no recurrence of warts had taken place.

I have given the history of this case rather extensively, because it shows that it required but a short time for the papillary excrescences to grow to the extent they were found. Evidently before March 9th only a few small warts around the meatus had been present; on May 7th they were found in large numbers over the entire pendulous urethra; but it is more than probable that they did not begin to crop out until after the recurrence of more acute symptoms on March 23d, leaving not more than six weeks for their development.

It is difficult to account for the occurrence of papillomatous growths in the deeper portions of the urethra, particularly if they have to be considered, as several authors believe, as outgrowths of the normal papillæ of the mucous membrane. According to Henle (*Handbuch der systemat. Anatomie*, ii, 2, p. 433), the mucous membrane of the male urethra is studded with papillæ for a distance of from one to four centimetres from the mouth—that is, as far as the stratified pavement epithelium extends; they are particularly numerous and close together near the meatus. Between the papillous and the smooth portions of the mucous membrane there lies a zone in which but single, slender papillæ are met with sometimes at long intervals. But in the above case they were found at a distance of at least twelve centimetres, or five inches, from the meatus.

In regard to the treatment, I can not agree with Rosenthal (*loc. cit.*) on the dangers from chromic acid. No bad effects will result as long as care is taken that none of the solution is allowed to flow upon healthy portions, but that

it is confined to the papillary growths. This can easily be attained by using only very small cotton tampons or, better still, pointed wooden sticks, like toothpicks, soaked with the acid. The treatment recommended by Oberländer—rubbing off the warts by means of cotton tampons—had not been heard of when this case was under observation, but I have more recently adopted it with good results in a case of vegetations in the portion of the urethra nearest the meatus. The best method, however, I have for several years found to be the galvano cautery, particularly where the excrescences were not too numerous.

In some cases, particularly in that of Briggs (*loc. cit.*), the papillomatous growths arrested the progress of olive-pointed bougies, and thus misled to the diagnosis of strictures of large caliber. Metal sounds of larger size do not meet with any resistance, although their passage may cause considerable pain and occasionally some bleeding. The discharge resulting from the vegetations is usually but slight and little colored.

CASE II closely resembles the one just reported, and therefore will be treated more briefly. Mr. O., twenty-five years of age, came under my treatment in the fall of 1883, after suffering from chronic gonorrhœa for almost two years. Endoscopic treatment greatly improved the condition, but, owing to repeated and protracted absences from New York, could not be followed up with sufficient energy. On his return from a trip to Europe, where he had been treated by several authorities, in October, 1884, I found a group of condylomata acuminata obstructing the external orifice of the urethra; but, on examination as far back as the bulbus, no vegetations could be detected in the urethra itself, only a number of circumscribed granulations. On December 8th, however, the papillomatous growth, had extended into the urethra and occupied the mucous membrane for about an inch and a half, either single or grouped, reaching almost the same size as in Case I. They were removed, partly with curved scissors, partly with the ring-shaped curette,

within a few weeks, but in February, 1885, after a brief absence of the patient, had recurred to the depth of an inch without attaining the same size and number as before. After removal by similar means, including chromic acid, none reappeared, although, owing to the irregular attendance of the patient, the chronic gonorrhœa was not entirely cured until about January, 1887.

CASE III is of special interest on account of the probable origin of the papillary growths. The patient, J. H., twenty-eight years of age, had come under my treatment in March, 1884, for epididymitis of the left side. He had been treated for stricture by a homœopath with "electrolysis" and sounds up to 28 F. for several months, but a slight discharge was still present. With the endoscope, on April 10th, about four centimetres from the meatus, several more or less elevated protuberances were found, about the size of a split pea, with a broad base. Some of them had a granulated surface; others showed distinct, fine, elongated papillæ; some blunt, some pointed. Opposite these warty growths, on the upper aspect of the urethra, there was a depressed scar in the shape of a glistening white stripe, about one centimetre long and three millimetres wide, overlapped by bulging portions of almost normal mucous membrane. Nearer the orifice another white scar, about one centimetre and a half long and even more depressed, was found. From the history it seems probable that the scars were produced by the "electrolytical," or rather galvano-cautery, treatment, and that the warty excrescences were also due to the effects of the electric current, which did not exert equally strong influence on the lower surface as on the upper one. The papillomatous growths were removed by applications of caustics (sulphate of copper, carbolic acid, etc.), and proved quite obstinate, but finally disappeared definitely.

CASE IV.—Sch., a porter, thirty-one years of age, had been treated for over a year with sounds and injections, but had still a slight gonorrhœal discharge in July, 1882. At the entrance to the membranous portion a group of small excrescences not larger than a hempseed were discovered, which freely bled on touch; they had a broad basis and an uneven, warty surface.

Another similar group was situated about half an inch farther back in the membranous portion itself, originating, as repeated observations demonstrated, from the right upper quadrant of the urethral circumference. Their location at a distance of about seven inches from the meatus, and at a spot where the endoscopic tube is particularly liable to irritate and to cause bleeding of any projecting portion of the mucous membrane, rendered the removal of these growths rather difficult. With a galvano cautery at my service, it would have been an easy matter to destroy them, but at that time I had to rely on caustics, chromic acid and nitrate of silver. In October, 1882, the last vestige had disappeared and none were observed afterward, the last examination having taken place as late as August, 1885.

CASE V.—C. D., aged twenty-six years, for the last eight years had hardly ever been entirely free of urethral discharge, with frequent exacerbations of the condition. About an inch and a half from the meatus I discovered a cockscomb-shaped new growth, a third of an inch in length, growing from the lower wall with a rather slender, more stemlike base, with an irregular, distinctly warty surface. After removal with the guillotine it was found to consist of a number of soft warts. The stump was treated with the galvano-cautery and the wound healed rapidly. The urethral discharge, however, was much more obstinate.

CASE VI.—G. St., aged twenty-two years, was under treatment in 1893 for incessant seminal emissions, having never had gonorrhœa or any other venereal disease. To facilitate the introduction of large sounds meatotomy was performed. Before the wound healed, warts began to develop within sight of the orifice, and within a short time spread to a depth of about two inches along the mucous membrane, densely covering the same on several places. In this case Oberländer's method of rubbing off the new growths with two cotton tampons and application of dermatol proved efficacious, the warts being of tender structure, soft, and of recent origin.

II. POLYPI.

Quite different in some respects from the papillary excrescences, larger, single new growths are occasionally ob-

served in the male urethra, which from their more or less smooth surface, their shape, and benign character, altogether from their resemblance to similar formations found in other cavities of the human body, may well be designated as polypi in the absence of a better, more strictly anatomical, or histological name. The favorite locality for the development of these real polypi seems to be the membranous portion, at least according to my own observation, which, I am aware, is at variance with that of other authors, who have found them in the pendulous urethra. As a rule they cause very few symptoms, except a continuous slight discharge; but, on examination with bougies à boule, or even with the urethrometer, they will feign a stricture, and in reality have done so in several instances, while to steel sounds of large caliber they do not offer any resistance. The first case that came under my observation was reported in 1881 (*Med. Record*, August 6th). Several polypi were removed by means of an instrument devised for the purpose and called the polypi guillotine. They were situated in the membranous urethra. The largest one, after having been in strong alcohol for some time, measured six millimetres in length and four millimetres in width at its base. Since then several cases have been seen by me. The history of the patient on whom the largest one of these growths was found seems worth while to be given in detail, as it illustrates in an excellent manner the complicated condition which may exist in certain cases of "chronic gonorrhœa," the difficulties and obstacles in the way of successful treatment, and the results which may be obtained by patient work without exposing the patient to the risk of sometimes unsuccessful operations, and without preventing him from attending to his business or profession.

CASE VII.—F. Ky., aged thirty-one years, barber, first came under my observation in September, 1885, with a slight

discharge, the remnant of a protracted gonorrhœa, lately complicated by symptoms of subacute cystitis. The urethral orifice was very narrow, surrounded by hard cicatricial tissue, and therefore was dilated by cutting. The immediate result was satisfactory, but the patient neglected the after-treatment. He appeared again in December, 1886, with an exacerbation of the chronic discharge, which had not entirely disappeared. The meatus had partly contracted again; in the fossa navicularis a firm stricture was met with which hardly admitted a No. 14 French bougie à boule. After reduction of the secretion to a minimum, on January 15, 1887, a No. 12 French bougie passed the fossa navicularis with difficulty; at three inches and a half passed another stricture, but was stopped at five inches and a half. The cicatricial tissue of the entire anterior urethra rendered it very difficult to establish a caliber of the urethra sufficient for the introduction of an endoscopic tube, and in spite of several incisions in the meatus, sounds, etc., it was not until April 15th that I succeeded in applying a tube No. 23, of three inches and a quarter in length, as far as the bulbous portion. The mucous membrane, almost in its entire length, presented a white, smooth appearance resembling scar tissue or that of a tendon, but formed a very uneven surface. Numerous prominences, particularly from the lower wall, bulged into the tube; some rounded, some conical, each one almost invariably bearing on the front aspect a distinct depression, the wide opening of a lacuna Morgagni. This, and the subsequent observation that applications to these lacunæ caused a gradual disappearance of the humps, seemed to justify the opinion that the inflammation had principally started from the lacunæ, and that cell infiltration, formation of connective tissue, and subsequent cicatrization had taken place around the cavities of the lacunæ Morgagni. This view has found confirmation by the researches in pathological anatomy of E. Finger (*Arch. f. Dermat.*, supplement 1 for 1891).

At the next examination, a few days later, a tube No. 23, five inches and a quarter long, was employed, but could not be passed beyond the bulbus, where it met with obstruction, although sounds Nos. 24 and 25 had previously reached the blad-

der without difficulty. On removal of the obturator a peculiar view presented itself, which I have rendered as faithfully as possible in Fig. 19 of Plate I, vol. i of *Morrow's System*. There protruded into the lumen of the tube a cylindrical body, slightly tapering toward the point, about three quarters of an inch long and an eighth of an inch wide at its base, of a dark pink color and a perfectly smooth surface. Further attempts to push on the tube proved fruitless, but revealed the origin of the tumor from the upper left quadrant of the field of view. The new growth was formed by very hard resistant tissue and was not very vascular. Unfortunately, my polypus guillotine was of too large a caliber to be introduced in this case, so I cut off at once a little more than two thirds of the growth with a sharp curette, cauterizing the stump with sulphate of copper, and removed some smaller pieces at subsequent sittings by curetting and by chromic-acid applications. On May 10th no trace of the tumor could be seen except a small white scar. Meanwhile the pendulous portion, particularly the mouths of the lacunæ, had been treated with solutions of silver and copper or iodoform at intervals of about four days. By the end of May the white protuberances had disappeared, and the openings of the lacunæ, which originally formed the center of the front aspects, had been greatly reduced in size and appeared on a level with the surrounding mucous membrane. When the patient had to leave New York soon after, he was able to introduce himself, without difficulty, a No. 24 sound.

CASES VIII AND IX.—In two other cases I have observed new growths of much smaller size originating from the same locality—the entrance to the membranous urethra—single in the case of Mr. H., aged thirty-two years, where the diagnosis had been made already with the greatest probability by Dr. F. Eversole, of St. Louis, who sent the patient to me on his removal here; double in that of Mr. P., aged thirty-five years. In both instances a whitish, sharply pointed, wormlike body, not more than a quarter of an inch in length, would be seen to be lifted from the level of the mucous membrane by the edge of the tube and to enter into its lumen. Like the larger cylindrical polypus in Case VII, they were quite firm and tough, with a

smooth surface and no tendency to bleed. They could be removed only with great difficulty by means of the curette.

These small growths did not cause any objective symptoms, neither obstruction nor discharge, but they seemed to be the cause of a certain irritation of the entire urethra, which became manifest by a burning pain in the deep urethra and frequent desire to urinate. After removal the new growths did not show a tendency to return. The disagreeable sensations in the urethra ceased after removal. In both instances I have been able to ascertain the permanency of the relief obtained by the patients.

III. ANGEIOMA CAVERNOSUM.

CASE X.—In 1884 I had occasion to examine the urethra of a young lawyer who had been repeatedly treated for gonorrhœa, the last attack lasting then about two months. An endoscopic tube, No. 23 F., about three inches long, the largest caliber the meatus would admit, was introduced into the bulbus. On its withdrawal, when the middle of the pendulous portion was reached, suddenly the left side of the urethral wall bulged into view. The protruding portion of the mucous membrane was found to be of a smooth surface and a dark bluish color, of the shape and size of a coffee bean, sharply defined at the base from the dark pink surrounding portions. The tumor was soft and easily yielded to the pressure of the tube, although on introduction it seemed to offer a slight resistance. On close inspection within the tumor a number of separate cords, separated by yellowish wide lines resembling the rings of a coil, could be distinguished, apparently representing dilated blood-vessels, and imparting to the whole mass the character of a cavernous angioma.

It is difficult to decide exactly whether this was really a cavernous tumor, or whether a pre existing or accidentally formed gap or a localized thinning out or weakening of the tunica albuginea of the corpus cavernosum allowed the cavernous tissue itself to protrude and to form a kind of diverticle. I am inclined to accept the former opinion,

principally on account of the eminently sharp angle which the base of the protuberance formed with the adjoining portion. I have seen similar conditions in small cavernous tumors of the mucous membrane of the hard palate and the anterior aspect of the soft palate, when the tumor would appear with a very distinct contour whenever the muscles of the palate were contracted.

The occurrence of such cavernous swellings is not without practical bearings, because any injury done to them may cause serious hæmorrhage. The swelling in this case was sufficiently palpable to produce the sensation of narrowing of the urethral lumen on examination with a bougie à boule or even with a urethrometer. Mistaken for a stricture, it might be made the object of internal urethrotomy and thereby cause hæmorrhage, thrombosis, etc.

IV. CROUPOUS OR MEMBRANOUS URETHRITIS AND DIPHTHERIA OF URETHRA.

The number of published cases of true membranous urethritis is a limited one. Tarnowsky mentions cases reported by Pitha and others. A. Pajor (*Arch. f. Dermatol.*, xxi, p. 3) describes several cases and reviews those observed by others. It appears from the perusal of this paper that conditions widely differing among themselves have been included under this name, from a small whitish patch to the shedding of almost the entire lining of the urethra in the shape of a membranous tube. The following case, while not so far developed, undoubtedly deserves to be considered one of membranous exudation upon the surface of the mucous membrane.

CASE XI.—Sch., aged thirty-one years, a musician, who had been under my treatment before for gonorrhœa and herpes pro-genitalis, called at my office October 5, 1884. One week ago, about eight days after sexual intercourse, eight months after

the disappearance of the last attack of gonorrhœa, he noticed a slight discharge from the urethra, for which he applied injections of "matico," which he had used before with good results. This time they were followed by pains in the anterior urethra and very slow, dripping evacuation of the urine. In my presence he could void the urine only in a very thin stream in spite of considerable efforts; the urine itself was almost clear. An elastic bougie No. 15 was arrested at two inches, a steel sound, No. 16 F., passed into the bladder; a slight hæmorrhage followed, apparently originating from the site of the resistance. Salicylate of sodium with extract of belladonna was prescribed and all local remedies set aside.

October 7th.—The patient reported that on the preceding afternoon a wormlike substance of a light color had been passed with the urine. A moderate quantity of purulent discharge was noticeable; the urine came in a very thin stream and was cloudy. Endoscope No. 23 was now introduced as far as the bulbus. On inspection the lumen of the tube was found to be filled up by a yellowish-green, gelatinous substance which was easily removed with a blunt hook. It proved to be a string about an inch and a half long and a fourth of an inch thick, and was apparently a solid mass; I searched in vain for a lumen, as it greatly resembled the casts seen in croupous bronchitis. A few smaller membranous pieces of white color were removed. The mucous membrane presented a moderately dark-red, smooth surface in the posterior urethra; in the central portion, where it bled considerably, the surface was eroded in several places with fine red points. The affected portions were dusted with iodoform and an injection of limewater diluted with two parts of water was ordered to be made four times a day.

October 10th.—The sensitiveness of the urethra was greatly reduced, the urine was emptied with but slight difficulty, the purulent discharge, however, had increased, the urine being cloudy. Endoscope No. 24 could not be introduced, but No. 23 reached the bulbus, although with difficulty and under considerable pain. It revealed the mucous membrane covered over a large area, extending almost from the meatus to the bulbus, with

a white, thin skin resembling that of boiled milk. After its removal the surface was partly smooth and pale pink, partly of a decidedly scarlet color, moist, with a rough, worm-eaten-like appearance, but did not bleed. These spots were touched with a ten-per cent. solution of nitrate of silver, the injection changed to zinc sulphocarbolate, a grain to the ounce.

October 14th.—The patient reported the discharge of a number of pieces of a white, membranelike substance and on one occasion of some blood with the urine, but little pain, less urgent desire to urinate, and diminished secretion. Endoscope No. 23 showed the formation of membranes over a very limited area only; some portions were covered with a thin white film, after the removal of which they appeared eroded, moist, dark red, and rather sensitive. The other parts had assumed a more natural pink color and smooth surface. Diluted liquor ferri perchloridi was applied and an injection containing one part of the same drug in two hundred of water was substituted.

October 17th.—Little pain, but slight hæmorrhage, or rather dripping of a bloody urine or secretion from the urethra. Patient can retain urine two hours and a half in the daytime; has to get up at night but once or twice; urinates in a much fuller stream; urine slightly cloudy but acid; contains some small pieces of membrane.

October 20th.—Reports the evacuation on the 18th of several blood coagula with the urine; after an injection, difficulty with the urine and temporary inability to empty the bladder, until the spontaneous ejection of a fibrinous clot brought relief. A small quantity of purulent discharge can be squeezed from the urethra. Endoscope No. 23 shows a number of small patches which are very sensitive to the touch, slightly eroded, bleeding from several distinct fine points. Nearer the meatus some portions are dark red but smooth. The entire length of the urethra was dusted with powder of iodoform; injection of nitrate of bismuth and pills of copaiba and cubebs internally.

October 22d.—Hardly any pain, but copious purulent discharge; with endoscope No. 23, less tendency to bleed; application of iodoform.

October 26th.—Continuous flow of pus; slight pain near meatus; urine less cloudy. Irrigation with solution of corrosive sublimate (1 to 15,000) followed by slight oozing of blood; continued pills.

November 1st.—Discharge became much less after two days; urine clear, followed by a few drops of blood at the end; slight pain in one spot in the anterior urethra. From this date on all the symptoms gradually disappeared under the injection of the liquor ferri perchloridi solution.

The following two cases do not strictly belong here, as the endoscope played no important part in their observation. I have no doubt that the affection of the urethra in both was a diphtheritic one, although I am unable to bring forth any positive proof. The rarity of diphtheritic lesions of the urethra (see F. J. Brown, *Journal of Cutaneous Diseases*, vol. viii, p. 289, 1890) will justify, I believe, their publication here:

CASE XII.—Mr. St., who had been under my treatment for chronic gonorrhœa up to May, 1889, on October 21st of the same year returned from a business trip with a fresh affection of the urethra. About eight days ago, three or four days after sexual intercourse, he noticed a slight pain in the orifice, with very scanty discharge. The flow rapidly increased within a few days in spite of the use of a mild injection, but remained more watery. When I saw the patient on the above date the entire glans penis and the prepuce were considerably swollen and reddened; the mucous membrane of both lips of the meatus showed a number of irregularly shaped, pale yellow spots. Owing to the tense swelling of the glans it was impossible to distinctly decide whether these spots were due to a superficial loss of substance or to an exudation on the surface. The general condition of the patient was by no means satisfactory; the inguinal glands were somewhat enlarged and sensitive on both sides. Irrigation with a mild solution of corrosive sublimate (about 1 to 40,000) and permanganate of potassium was very painful. Iodo-

form was applied to the yellow spots, and an injection of acetate of lead and boric acid was prescribed.

October 23d.—The swelling of prepuce and glans had greatly subsided; the meatus was still very red; the mucous membrane of both lips showed circumscribed areas of a yellowish color, which gave the distinct impression of membranes formed upon the surface or within the superficial layers of the mucous membrane itself; they certainly were not ulcers. A very copious watery discharge had continued; the urine was somewhat cloudy; moderate pain in the region of the kidneys. Irrigation with corrosive sublimate (1 to 40,000); salicylate of sodium internally.

25th.—Swelling almost entirely disappeared, except around the urethral orifice itself, which was still quite hard to the touch. The membranous coating was much less extended, and on October 27th no trace of it was left, while a watery secretion continued, and the swelling of the left inguinal glands was noticeable for some time. The healing process was altogether very slow, and when the discharge finally stopped, or was reduced to a minimum, the anterior portion of the urethra was found to be narrowed down to admit a No. 21 F. sound with difficulty.

CASE XIII.—Mr. R. had been under my treatment since February, 1888, for syphilis, which heretofore had been of a very mild type.

November 7th.—He reported that for some time he had noticed a slight discharge from the urethra, and had used with good results an injection of chloride of zinc (five grains to four ounces). Within the last two days, however, he had experienced quite severe pain in the urethra, with frequent desire to urinate, sometimes without being able to accomplish this on account of a severe pain which was felt as soon as the outflowing urine reached a certain spot. The meatus and the entire glans were of a deep red color and intensely swollen; the inside of the lips was coated with whitish-gray membranes, resembling felt. The urethra, for about three inches, could be felt as a hard, thickened cord; there was a thin, watery discharge of a dirty gray color, containing small, grayish crumbled particles of tissue in suspension. The patient was feverish, with loss of appetite and great general depression. An attempt to intro-

duce a Nélaton catheter, No. 8 F., failed on account of the severe pain, but was followed by spontaneous evacuation of the urine. Applications of lead-water with boric acid brought but little relief until after the expulsion on the next morning of a membranous substance, which was found upon the cotton placed around the meatus.

9th.—The swelling and hardness of the parts had largely subsided, only the lips of the meatus were still swollen and sensitive; near the orifice remnants of the membranous infiltration were found; the other portions looked red and moist, suggesting loss of the epithelial cover.

After November 11th the symptoms rapidly disappeared, only the orifice continued for a longer period to present a very tender, somewhat eroded surface, and, like the rest of the urethra, to be extremely sensitive. This tenderness proved a serious obstacle to the final cure of the at no time copious or purulent discharge. The general health of the patient, which at the time did not seem to be influenced at all by the syphilitic infection, gradually improved. During all this time, and for several months afterward, no symptoms of syphilis whatever were apparent, although all specific treatment had been suspended.

V. PURULENT DISCHARGE FROM THE DUCTUS EJACULATORIUS; CYST OF THE UTRICULUS (?).

It has been but rarely described as observed in endoscopic practice that purulent discharge was found oozing from a distinct spot. In the paper mentioned above I referred to a case in which a small drop of a white, milky fluid was seen to ooze from a minute spot on the upper surface of the urethral lining, about an inch forward of the membranous portion. This was exactly observed on the very same spot on different examinations at different times. From the location I concluded that the opening from which the fluid emerged was the mouth of the duct of one of Cowper's glands. In the following case the source of a purulent discharge was apparently the ductus ejaculatorius:

CASE XIV.—A. Sch., twenty-one years of age, a barber, came under my observation in August, 1886. As his father informed me, he had been sent to work in a factory when quite young, and had quickly acquired the habit of self-abuse. About a year ago he had contracted gonorrhœa, which after a rather acute course of several weeks had left a moderate discharge, sufficient to form a thick yellow drop on a rag which was wrapped about the orifice. The meatus showed extreme redness of the mucous membrane and several folds and deep furrows, while the lower portion was covered by a thin membrane. This was cut through immediately, as it barred the use of any larger instrument. Not until November 18th, after several relapses of copious secretion, cystitis, etc., was I able to make an examination with the endoscope. No. 23, later 24, reached the prostatic portion without difficulty. The mucous membrane of the entire posterior urethra was dark red and finely granulated, particularly on both sides of the *caput gallinaginis*, extending into the furrows on both sides of the *colliculus seminalis* itself. The anterior portion of the urethra showed but slight lesions near the meatus. On subsequent examinations I found these furrows covered with pus or pus flakes, and could distinctly watch a small drop of pus oozing out of a minute opening; after wiping it off, on pressure with the edge of the tube a new drop could repeatedly be squeezed out. This could be observed on several subsequent examinations; at first the discharge appeared on both sides, but after December 13th only on the left side of the patient could the purulent drop be squeezed out with the edge of the tube. Applications of solutions of nitrate of silver (two, five, and ten per cent.) and of iodoform and iodoform-ether seemed to reduce the suppuration and at times to suppress it entirely, but it returned over and over again as soon as the patient had an emission. I then tried to enter the opening with probes and with a long cannula of a Pravaz's syringe constructed for the purpose, and after several futile attempts succeeded in entering the point of the syringe and in injecting a few drops of a two-and-a-half-per-cent. solution of nitrate of silver. The result was apparently a very good one; after every application the quantity of the purulent discharge

became smaller. On February 1st the syringe was not used, but only an application of a ten per-cent. solution of silver and iodoform to the site of the oozing point was made, but February 3d symptoms of a very acute epididymitis of the left side set in and rapidly developed into a severe and painful swelling. The inflammation at one time threatened to extend to the right epididymis, but fortunately the progress was checked.

February 23d.—The epididymitis had passed off sufficiently to allow of endoscopic examination again, when the prostatic urethra appeared in an almost normal pink color, with a perfectly smooth surface; no pus could be squeezed out on the locality of its former appearance either then or on subsequent occasions up to May 24, 1887.

I have had the patient under occasional observation ever since, and have treated him repeatedly for fresh attacks of gonorrhœa, but never have I been able to notice similar conditions again.

The same good final result was not obtained in another observation with similar features.

CASE XV.—W. K., aged about twenty years, a student, came under my treatment about seven months after his first infection with gonorrhœa. The disease had never entirely ceased, but had broken out with renewed copious flow of pus on several provocations. The case proved a very obstinate one, and not until after four months had the acute symptoms sufficiently subsided to allow of an examination with the endoscope. This revealed an accumulation of pus in the membranous portion, and at subsequent sittings I could observe that on approaching the prostatic portion, the tube would suddenly be filled with a more or less watery, but slightly sticky, generally opaque or slightly blood-tinged fluid. Applications of different drugs, among them the peroxide of hydrogen, gradually changed the character of the fluid to an almost clear condition; it became less in quantity and at times disappeared altogether. The discharge from the urethra had stopped and the filaments in the urine become very insignificant, when suddenly, without any apparent cause, the left epididymis showed great tenderness and became the seat of a comparatively mild inflammation. When

the patient had to leave New York soon afterward, the epididymitis was entirely cured, no discharge could be seen, and the urine was perfectly clear and almost free of threads; but I was informed that a slight discharge had returned afterward. The effusion of a more or less clear, watery fluid into the cavity of the endoscopic tube on its entering the prostatic urethra I have observed in several cases where there existed neither a discharge nor even a history of gonorrhœa, but where the patients complained of a constant annoying, not clearly describable, sensation at the site of the prostatic urethra.

CASE XVI.—In one instance I have seen the colliculus seminalis forming a pea-sized protuberance of a bluish-white color, almost transparent, making the impression of a cyst filled with serum. On pressure with the edge of the tube, a considerable quantity of a clear, watery fluid was emptied into the urethra. A slight depression on the surface seemed to indicate the sinus prostaticus or the orifice of the utriculus. The galvano-cautery was applied to the most prominent part of the swelling. Since then I have not observed again the copious discharge of watery fluid. At the next examination the colliculus appeared but slightly enlarged, with a utricular orifice of the form and size observed in healthy persons. I have little doubt that in this case there existed a cystic dilatation of the utriculus, probably with the product of its own glands. Belfield (*Jour. of the Amer. Med. Association*, April 21, 1894) has recently called attention to the importance of this generally neglected organ. In the face of the great difficulties of examining this portion of the urethra, I feel somewhat reluctant to make the diagnosis of a cyst more positively. The application of the galvano-cautery was followed by great alleviation of the patient's complaints.

VI. EXAMPLES OF THE MORE FREQUENT AND USUAL CONDITIONS IN CHRONIC URETHRAL DISEASE.

The observations reported in the foregoing represent almost all the unusual and particularly interesting cases out of a large number of patients subject to endoscopic examination and treatment within almost fifteen years. In the largest

number of instances only less striking and less remarkable conditions were found. If I am not entirely mistaken, much of the disappointment experienced by those who have endeavored to apply the endoscope for diagnosis and treatment of urethral diseases has been due to the exaggerated expectations of meeting with such extraordinary conditions, instead of other trivial and apparently less important lesions, which seemed hardly worth the trouble of endoscopic examination. Still, I believe we have to share this experience with other specialists, particularly with the otologist, the laryngologist, and others. The bulk of their cases will show only conditions due to chronic catarrhal inflammation, and a small percentage only will represent cases of tumors of all kinds and other more or less rare phenomena. These simple conditions, however, furnish a fruitful field for therapeutic action, and fully justify the increased outlay of work and time spent on the examination with special instruments and local treatment rendered possible by these means. It therefore occurred to me that it would not be without interest to add a few examples of such cases as are likely to occur most frequently in practice, and apt to illustrate the combination of various pathological conditions in actual practice. Most of these cases had been prepared for my article on Endoscopy in *Morrow's System*, but want of space prevented their insertion:

CASE XVII.—K, twenty-seven years of age, has had gonorrhœa at different times. For the last eighteen months, in spite of continued treatment with injections, sounds, etc., he has never been entirely free of urethral discharge, which on the slightest provocation became quite copious again; has had cystitis and very obstinate rheumatism. Urine slightly cloudy, with numerous filaments. Endoscope No. 26 easily reaches the bulbus, where the mucous membrane appears moist, dark red, of a tender, somewhat infirm texture, easily bleeding. Central portion of pendulous urethra almost normal; in the anterior re-

gion a number of dilated, dark-red, and moist lacunæ Morgagni; congestion diminishing toward the meatus.

CASE XVIII.—M., aged thirty years, has had gonorrhœa for the last two years, at no time of a very severe character, but constantly undergoing exacerbation on drinking, etc. Meatus very tight. After meatotomy endoscope No. 26 shows anterior portion of prostatic and the membranous urethra in a state of congestion; posterior portion of pendulous urethra normal, in the anterior half a number of prominent lacunæ and dark-red rough patches in the lateral folds.

CASE XIX.—B., aged twenty-four years, got gonorrhœa in January with epididymitis on both sides; in April, after treatment with deep injections, a small white drop remained in the morning. Endoscope No. 24 shows but slight redness in posterior parts; in the pendulous portion a number of wide and dark-red lacunæ and longitudinal furrows with dark, uneven, worm-eaten-like surface.

CASE XX.—A., aged twenty-six years, had gonorrhœa six years ago, which lasted a year; eight months ago, for the second time gonorrhœal infection. A discharge continues in the morning with a number of filaments in the urine. With endoscope No. 24 the membranous portion appears red and œdematous, bleeding at its entrance; pendulous urethra normal for almost two thirds of its length; the anterior third rigid, uneven, dull red, lusterless surface; symptoms decreasing toward the meatus.

CASE XXI.—B., aged thirty years, has had gonorrhœa frequently within the last fifteen years; a year ago had two strictures cut; a thin, viscid, whitish secretion continues, with numerous thin threads. Endoscope No. 28 shows normal condition of prostatic and distal half of membranous portion; anterior half of membranous and bulbous urethra dark red, granulated, bleeding; in pendulous portion scars along the upper wall surrounded by dark-red, moist, bulging folds; lacunæ moderately wide and rough.

CASE XXII.—H., aged twenty-eight years, had gonorrhœa several times; lately epididymitis. In spite of treatment with sounds, deep injections, etc., some discharge persists. Endo-

scope No. 24 passes with difficulty through anterior portion, easily through deeper parts. Membranous and posterior half of cavernous urethra smooth and pale pink; central and anterior third of the latter rather resistant, with a number of small longitudinal fissures; central figure irregular, triangular in some places, surface rough, granulated, dark red, of a dull, dirty shade; in some places white, firm, almost cicatricial condition.

CASE XXIII.—G., aged twenty-three years, brewer, has had gonorrhœa several times. Seven years ago transient retentio urinæ, which has occurred frequently within the last year; no discharge for some time, but frequent pain in perinæum. *Per rectum*, prostate gland distinctly enlarged; pressure produces a grayish, thin discharge from urethra. Endoscope No. 24 enters membranous portion with a sudden jerk; shows colliculus seminalis considerably swollen, dark red, with uneven surface, easily bleeding; membranous portion white cicatricial tissue; pendula normal, except for a number of wide lacunæ and moderate diffuse redness in the anterior portion.

CASE XXIV.—Kl., aged twenty-six years, has had gonorrhœa several times; the last time four months ago, but now no discharge for several weeks; complains of severe burning during and after micturition; urine perfectly clear; no threads. Endoscope No. 25 easily reaches the bulbus; shows diffuse redness and uneven surface in posterior portion of pendula; central and anterior portions normal except a number of dark-red, almost brown, dry, slightly corroded patches in both lateral folds, which stain dark brown on being touched with tincture of iodine.

42 EAST TWENTY-SECOND STREET.

The New York Medical Journal.

A WEEKLY REVIEW OF MEDICINE.

EDITED BY

FRANK P. FOSTER, M.D.

THE PHYSICIAN who would keep abreast with the advances in medical science must read a *live* weekly medical journal, in which scientific facts are presented in a clear manner; one for which the articles are written by men of learning, and by those who are good and accurate observers; a journal that is stripped of every feature irrelevant to medical science, and gives evidence of being carefully and conscientiously edited; one that bears upon every page the stamp of desire to elevate the standard of the profession of medicine. Such a journal fulfills its mission—that of educator—to the highest degree, for not only does it inform its readers of all that is new in theory and practice, but, by means of its correct editing, instructs them in the very important yet much-neglected art of expressing their thoughts and ideas in a clear and correct manner. Too much stress can not be laid upon this feature, so utterly ignored by the “average” medical periodical.

Without making invidious comparisons, it can be truthfully stated that no medical journal in this country occupies the place, in these particulars, that is held by THE NEW YORK MEDICAL JOURNAL. No other journal is edited with the care that is bestowed on this; none contains articles of such high scientific value, coming as they do from the pens of the brightest and most learned medical men of America. A glance at the list of contributors to any volume, or an examination of any issue of the JOURNAL, will attest the truth of these statements. It is a journal for the masses of the profession, for the country as well as for the city practitioner; it covers the entire range of medicine and surgery. A very important feature of the JOURNAL is the number and character of its illustrations, which are unequaled by those of any other journal in the world. They appear in frequent issues, whenever called for by the article which they accompany, and no expense is spared to make them of superior excellence.

Subscription price, \$5.00 per annum. Volumes begin in January and July.

PUBLISHED BY

D. APPLETON & CO., 72 Fifth Avenue, New York.

